



Sequence Listing.ST25.txt
SEQUENCE LISTING

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<120> PLANT DISEASE RESISTANCE AND SAR REGULATOR PROTEIN

<130> 09663.0068USWO

<140> 10/596,010

<141> 2006-05-25

<150> PCT/DK2004/000822

<151> 2004-11-26

<150> DK PA200301759

<151> 2003-11-28

<150> US 60/526,319

<151> 2003-12-01

<160> 28

<170> PatentIn version 3.3

<210> 1

<211> 669

<212> DNA

<213> Arabidopsis sp.

<400> 1

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attcctagag agccggtggt tatctacgcc gtatcccca aggttggtaca cgcaaccgcg    240
tctgagttca tgaacgtagt ccagcgactc acagggatct cctctggtgt tttcctcgaa    300
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<400> 2

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20 25 30

Ser Val His Lys Asp Ser His Lys Ile Lys Lys Pro Pro Lys His Pro
35 40 45

Ala Pro Pro Pro Asn Arg Asp Gln Pro Pro Pro Tyr Ile Pro Arg Glu
50 55 60

Pro Val Val Ile Tyr Ala Val Ser Pro Lys Val Val His Ala Thr Ala
65 70 75 80

Ser Glu Phe Met Asn Val Val Gln Arg Leu Thr Gly Ile Ser Ser Gly
85 90 95

Val Phe Leu Glu Ser Gly Gly Gly Gly Asp Val Ser Pro Ala Ala Arg
100 105 110

Leu Ala Ser Thr Glu Asn Ala Ser Pro Arg Gly Gly Lys Glu Pro Ala
115 120 125

Ala Arg Asp Glu Thr Val Glu Ile Asn Thr Ala Met Glu Glu Ala Ala
130 135 140

Glu Phe Gly Gly Tyr Ala Pro Gly Ile Leu Ser Pro Ser Pro Ala Leu
145 150 155 160

Leu Pro Thr Ala Ser Thr Gly Ile Phe Ser Pro Met Tyr His Gln Gly
165 170 175

Gly Met Phe Ser Pro Ala Ile Pro Leu Gly Leu Phe Ser Pro Ala Gly
180 185 190

Phe Met Ser Pro Phe Arg Ser Pro Gly Phe Thr Ser Leu Val Ala Ser
195 200 205

Pro Thr Phe Ala Asp Phe Phe Ser His Ile Trp Asp Gln Asp
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<400> 4
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Ile Pro Leu Lys Val Arg Gly Asp Ser His Lys Ile Ile Lys Lys Pro
20 25 30

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Pro Leu Ala Pro Pro His Pro Gln Pro Gln Pro Pro Gln Thr His Gln
35 40 45

Gln Glu Pro Ser Gln Ser Arg Pro Pro Pro Gly Pro Val Ile Ile Tyr
50 55 60

Thr Val Ser Pro Arg Ile Ile His Thr His Pro Asn Asn Phe Met Thr
65 70 75 80

Leu Val Gln Arg Leu Thr Gly Lys Thr Ser Thr Ser Thr Thr Ser Ser
85 90 95

Ser Tyr Ser Ser Ser Thr Ser Ala Pro Lys Asp Ala Ser Thr Met Val
100 105 110

Asp Thr Ser His Gly Leu Ile Ser Pro Ala Ala Arg Phe Ala Val Thr
115 120 125

Glu Lys Ala Asn Ile Ser Asn Glu Leu Gly Thr Phe Val Gly Gly Glu
130 135 140

Gly Thr Met Asp Gln Tyr Tyr His Tyr His His His His His His Gln
145 150 155 160

Glu Gln Gln His Gln Asn Gln Gly Phe Glu Arg Pro Ser Phe His His
165 170 175

Ala Gly Ile Leu Ser Pro Gly Pro Asn Ser Leu Pro Ser Val Ser Pro
180 185 190

Asp Phe Phe Ser Thr Ile Gly Pro Thr Asp Pro Gln Gly Phe Ser Ser
195 200 205

Phe Phe Asn Asp Phe Asn Ser Ile Leu Gln Ser Ser Pro Ser Lys Ile
210 215 220

Gln Ser Pro Ser Ser Met Asp Leu Phe Asn Asn Phe Phe Asp Ser
225 230 235

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<210> 8
<211> 21

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<213> Arabidopsis sp.

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<210> 9
<211> 791
<212> DNA
<213> Brassica oleracea

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aactcttttg agaaaataat ggatccgctg gagtctttcg ccggcggcaa tccttccgac 180
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tcatccgccc tcttcctcga atccggtaac ggaggagatg tatctccggc ggcgagactc 480
gccgcgaccg agaatgcaag cccgagagga ggaaaagaac cggatgatggc ggctaaagat 540
gagacggtgg aaatcgcgac ggctatggaa gaagcagccg agttgagcgg ctatgcgccg 600
gggatactct ccccttctcc ggctatgtta ccgacagctt ctgccggaat attctcgag 660
atgactactc accaaggtgg gatgttctcg ccgggattgt tttcgccggc ggggttaatg 720
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atttggggat a 791

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<211> 217
<212> PRT
<213> Brassica oleracea

<400> 10
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1 5 10 15
Asn Gln Lys Arg Gln Leu Gln Ile Cys Gly Pro Arg Pro Ser Pro Leu
20 25 30
Ser Val Asn Lys Asp Ser His Lys Ile Lys Lys Pro Pro Lys His Pro
35 40 45
Ala Pro Pro Pro Gln His Arg Asp Gln Ala Pro Leu Tyr Ala Ala Arg
50 55 60

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Glu Pro Val Val Ile Tyr Ala Val Ser Pro Lys Val Val His Thr Thr
65 70 75 80

Ala Ser Asp Phe Met Asn Val Val Gln Arg Leu Thr Gly Ile Ser Ser
85 90 95

Ala Val Phe Leu Glu Ser Gly Asn Gly Gly Asp Val Ser Pro Ala Ala
100 105 110

Arg Leu Ala Ala Thr Glu Asn Ala Ser Pro Arg Gly Gly Lys Glu Pro
115 120 125

Val Met Ala Ala Lys Asp Glu Thr Val Glu Ile Ala Thr Ala Met Glu
130 135 140

Glu Ala Ala Glu Leu Ser Gly Tyr Ala Pro Gly Ile Leu Ser Pro Ser
145 150 155 160

Pro Ala Met Leu Pro Thr Ala Ser Ala Gly Ile Phe Ser Gln Met Thr
165 170 175

Thr His Gln Gly Gly Met Phe Ser Pro Gly Leu Phe Ser Pro Ala Gly
180 185 190

Leu Met Ser Pro Phe Gly Phe Ala Ser Leu Val Ala Ser Pro Thr Phe
195 200 205

Ala Asp Leu Phe Ser His Ile Trp Gly
210 215

<210> 11
<211> 20
<212> DNA
<213> Brassica oleracea

<400> 11
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<211> 20
<212> DNA
<213> Brassica oleracea

<400> 12
tatccccaaa tatgactgaa 20

<210> 13
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Sequence Listing.ST25.txt

<213> Brassica oleracea

<400> 13

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acagagaaga aacaagttgg atccaaactc tctacaacaa aaagtagtga acgagagaag      180
ctctcccca gcgtttaatg gatccgtcgg agcacttcgc cggcggtaat cctttcgtac      240
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<210> 14

<211> 212

<212> PRT

<213> Brassica oleracea

<400> 14

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Thr Pro Lys Arg Gln Leu Gln Ile Cys Gly Pro Arg Pro Ser Pro Leu
20          25          30

Ser Val Asn Lys Asp Ser His Lys Ile Lys Lys Pro Pro Arg His Pro
35          40          45

Ala Pro Pro Pro Gln His His Arg Asp Gln Ala Pro Leu Tyr Pro Pro
50          55          60

Arg Glu Pro Val Val Ile Tyr Ala Val Ser Pro Lys Val Val His Thr
65          70          75          80

Thr Thr Ser Asp Phe Met Asn Val Val Gln Arg Leu Thr Gly Ile Ser
85          90          95

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Ser Glu Val Phe Leu Glu Ser Arg Asn Asp Gly Asp Val Ser Pro Ala
100 105 110

Ala Arg Leu Ala Ala Thr Glu Asn Ala Ser Pro Arg Gly Gly Lys Glu
115 120 125

Pro Val Glu Ser Ser Thr Ala Met Glu Glu Ala Ala Glu Phe Gly Cys
130 135 140

Tyr Val Pro Gly Ile Leu Ser Pro Ser Pro Ala Met Leu Pro Thr Val
145 150 155 160

Pro Ala Gly Ile Phe Ser Pro Met Phe His Leu Gly Gly Leu Phe Ser
165 170 175

Pro Ala Leu Pro Pro Gly Leu Phe Ser Pro Ala Gly Leu Met Ser Pro
180 185 190

Gly Tyr Ala Ser Leu Ala Ser Pro Asn Phe Ala Asp Phe Phe Ser His
195 200 205

Ile Trp Asp Pro
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<210> 15
<211> 393
<212> DNA
<213> Glycine max

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ataatctaca ccgtgtcccc caaggtgatt cacaccaccc caagtgactt catgaacctc 180
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<210> 16
<211> 131
<212> PRT
<213> Glycine max

<400> 16

Gln Leu Gln Gly Pro Arg Pro Thr Pro Leu Arg Ile Asn Lys Asp Ser
Page 8

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20 25 30

Gln Pro Pro Pro Arg Gln Pro Ile Ile Ile Tyr Thr Val Ser Pro Lys
35 40 45

Val Ile His Thr Thr Pro Ser Asp Phe Met Asn Leu Val Gln Arg Leu
50 55 60

Thr Gly Ser Ser Ser Ser Ser Ser Ala Glu Val Val Met Ser Asn Asn
65 70 75 80

Asn Asn Thr Thr His Val Asp Pro Phe Asn Asn Gly Gly Gly Gly Met
85 90 95

Val Ser Pro Ala Ala Arg Tyr Ala Thr Ile Glu Lys Ala Met Ser Pro
100 105 110

Met Gly Lys Lys His Val Leu Leu Pro Ser Val Asn Asn Ile Ile Ser
115 120 125

Asp Val Glu
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<211>	19
<212>	DNA
<213>	Glycine max

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<210>	18
<211>	20
<212>	DNA
<213>	Glycine max

<400> 18
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<210> 19
<211> 927
<212> DNA
<213> Oryza sp.
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<400> 19
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<210> 20
 <211> 306
 <212> PRT
 <213> Oryza sp.

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Gln His Gln Gln Gln Pro Thr Thr Pro Arg Arg Gln Leu Gln Gly Pro
 20 25 30

Arg Pro Pro Arg Leu Asn Val Arg Met Glu Ser His Ala Ile Lys Lys
 35 40 45

Pro Ser Ser Gly Ala Ala Ala Ala Ala Ala Ala Ala Gln Ala Arg Arg
 50 55 60

Glu Gln Gln Gln Pro Pro Pro Arg Ala Pro Val Ile Ile Tyr Asp Ala
 65 70 75 80

Ser Pro Lys Ile Ile His Ala Lys Pro Asn Glu Phe Met Ala Leu Val
 85 90 95

Gln Arg Leu Thr Gly Pro Gly Ser Gly Pro Pro Ala Pro Pro His Gln
 100 105 110

Sequence Listing.ST25.txt

Gly Glu Ala Gln Ala Gln Asp Tyr Pro Met Met Asp Glu Ala Ala Ala
115 120 125

Gln Gln Phe Phe Pro Pro Glu Leu Leu Leu Ser Pro Ser Ala Ala Met
130 135 140

Ser Pro Ala Ala Arg Leu Ala Thr Ile Glu Arg Ser Val Arg Pro Met
145 150 155 160

Pro Glu Pro Ala Pro Glu Tyr Val Asp Ile Thr Asn Gly Gly Gly Gly
165 170 175

Gly Gly Val Asp Asp Gly Gly Leu Ala Ala Ile Leu Gly Ser Ile Arg
180 185 190

Pro Gly Ile Leu Ser Pro Leu Pro Ser Ser Leu Pro Pro Ala Ala Val
195 200 205

Pro Gly Gln Phe Ser Pro Leu Pro Phe Asp Ala Arg Pro Leu Pro Phe
210 215 220

Asp Ala Ser Cys Ile Ser Trp Leu Asn Glu Leu Ser Pro Ile Leu Arg
225 230 235 240

Ala Ala Ser Ala Gly Ala Ala Ser Ser Gly Ser Gly Gly Gly Gly Ser
245 250 255

Gly Gly Asn Thr Ser Asn Gly Gly Gly Ala Arg Pro Pro Pro Ser Tyr
260 265 270

Tyr Ala Asp Pro Phe Val Pro Ser Pro Arg His Leu Leu Ala Thr Pro
275 280 285

Thr Val Pro Ser Pro Ala Thr Cys Ala Glu Leu Phe Ser Asn Leu Pro
290 295 300

Asp Leu
305

<210> 21
<211> 16
<212> DNA
<213> Oryza sp.

<400> 21
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16

<210> 22

Sequence Listing.ST25.txt

<211> 19
<212> DNA
<213> Oryza sp.

<400> 22
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<210> 23
<211> 781
<212> DNA
<213> CaMV 35S promoter duplicated

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tgcccagcta tctgtcactt catcaaaagg acagtagaaa aggaagggtg cacctacaaa 180
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gaaaaagaag acgttccaac cacgtcttca aagcaagtgg attgatgtga tatctccact 660
gacgtaaggg atgacgcaca atcccactat ccttcgcaag accttcctct atataaggaa 720
gttcatttca tttggagagg acacgctgaa atcaccagtc tctctctaca aatctatctc 780
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<210> 24
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<212> DNA
<213> Agrobacterium NOS terminator

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acgttattta tgagatgggt ttttatgatt agagtcccg c aattatacat ttaatacgcg 180
atagaaaaca aaatatagcg cgcaaactag gataaattat cgcgcgcggt gtcattctatg 240
ttactagatc ggg 253

<210> 25
<211> 189
<212> DNA

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<213> Synthetic intron

<400> 25
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tagtttataa gtgtgtatat tttaatttat aacttttcta atatatgacc aaaatttggt 180
gatgtgcag 189

<210> 26
<211> 207
<212> PRT
<213> Oryza sp.

<400> 26
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20 25 30
Ser His Lys Ile Arg Lys Gln Glu Pro Val Gln Gln Leu Arg Gln Pro
35 40 45
Val Ile Ile Tyr Thr Met Ser Pro Lys Val Val His Ala Asn Ala Ala
50 55 60
Asp Phe Met Ser Val Val Gln Arg Leu Thr Gly Ala Pro Pro Thr Ala
65 70 75 80
Pro Pro Gln Pro Gln Pro His His Pro Thr Leu Leu Ala Gln Met Pro
85 90 95
Pro Gln Pro Ser Phe Pro Phe His Leu Gln Gln Gln Asp Ala Trp Pro
100 105 110
Gln Gln Gln His Ser Pro Ala Ala Ile Glu Gln Ala Ala Ala Arg Ser
115 120 125
Ser Gly Ala Asp Leu Pro Pro Leu Pro Ser Ile Leu Ser Pro Val Pro
130 135 140
Gly Thr Val Leu Pro Ala Ile Pro Ala Ser Phe Phe Ser Pro Pro Ser
145 150 155 160
Leu Ile Ser Pro Val Pro Phe Leu Gly Ala Thr Thr Thr Ser Ser Ala
165 170 175

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Ala Pro Ser Thr Ser Pro Ser Pro Met Gly Gly Ser Ala Tyr Tyr Trp
180 185 190

Asp Leu Phe Asn Met Gln Gln Gln Gln His Tyr His His Gln Asn
195 200 205

<210> 27
<211> 238
<212> PRT
<213> Zea mays

<400> 27

Met Asp Pro Pro Ser Ser Ser Gly Arg Pro Thr Thr Pro Arg Arg Gln
1 5 10 15

Leu Gln Gly Pro Arg Pro Pro Arg Leu Asn Val Arg Met Glu Ser His
20 25 30

Ala Ile Lys Lys Pro Ser Ala Ser Gly Ala Pro Pro Ala Pro Gly Gln
35 40 45

Gly Arg Pro Arg Asp His His His His His Pro Gln Pro Gly Arg Ala
50 55 60

Pro Val Ile Ile Tyr Asp Ala Ser Pro Lys Val Ile His Ala Lys Pro
65 70 75 80

Ser Glu Phe Met Ala Leu Val Gln Arg Leu Thr Gly Pro Gly Ala Gln
85 90 95

Ala Gln His Glu Arg His Val Ala Asp Asp Asp Ala Thr Ala Asn Gly
100 105 110

Gly Gly Val Leu Gly Gln Ala Phe Leu Pro Pro Glu Leu Leu Ser
115 120 125

Pro Ser Ala Ala Met Ser Pro Ala Ala Arg Leu Ala Thr Ile Glu Arg
130 135 140

Ser Val Arg Pro Val Pro Ala Pro Ala Pro Ala Pro Asp Tyr Ala Ala
145 150 155 160

Asp Gly His Pro Arg Gly Gly Ala Arg Pro Arg Glu Ala Pro Arg His
165 170 175

Pro Val Pro Ala Ala Val Leu Ala Ala Ala Gly Arg Arg Val Gly Pro
180 185 190

Sequence Listing.ST25.txt

Val Leu Ala Ala Ala Leu Arg Pro Gln Gln Arg Gln Leu Ala Gln Arg
195 200 205

Ala Gln Pro His Pro Pro Gly Ser Val His Gly Gln Arg Ser Ala Pro
210 215 220

Leu Ala His Ala His Gly Pro Thr Gly Gly Ser Arg Gln Pro
225 230 235

<210> 28
<211> 271
<212> PRT
<213> Zea mays

<400> 28

Gln Gly Pro Arg Pro Pro Arg Leu Ala Val Ser Lys Asp Ser His Lys
1 5 10 15

Val Arg Lys Pro Pro Val Ala Pro Gln Arg Gln Gln His Gln His Gln
20 25 30

Gln Pro Ala Ala Gln Leu Gln Gln Gln Gln His Gln Tyr His Gln Gln
35 40 45

Gln Gln Gln Gln Gly Arg Gln Pro Val Ile Ile Tyr Asp Ala Ser Pro
50 55 60

Lys Val Ile His Thr Lys Pro Gly Asp Phe Met Ala Leu Val Gln Arg
65 70 75 80

Leu Thr Gly Pro Gly Ser Thr Ser Gln Ala Gln Phe Asp Ala Ala Ala
85 90 95

Ala Ala Ala Gly Pro Ser His Pro Ala Ala Met Glu Phe Glu Pro Arg
100 105 110

Glu Phe Leu Leu Ser Pro Thr Ala Ala Leu Ser Pro Ala Ala Arg Leu
115 120 125

Ala Ala Ile Glu Arg Ser Val Arg Pro Leu Pro Pro His His Ala Pro
130 135 140

Ala Ala Val Pro Pro Tyr Phe Gly Ala Thr Asn Asp Asp Gly Phe Phe
145 150 155 160

Leu Pro Gly Ser Ala Asp Met Asp Ser Leu Ser Ala Ala Leu Gly Pro
165 170 175

Sequence Listing.ST25.txt

Pro Ala Gly Arg Pro Gly Ile Leu Ser Pro Ala Ala Leu Pro Pro Ala
180 185 190

Ala Ser Thr Gly Leu Phe Ser Pro Met Pro Phe Asp Pro Ser Cys Leu
195 200 205

Ser Trp Leu Ser Glu Leu Ser Pro Phe Leu Pro Ser Ala Gly Thr Arg
210 215 220

Ala Ala Ala Ala Gly Leu Leu Asp Gln Ala Pro Phe Ala Pro Ser Pro
225 230 235 240

Arg Ser Ser Leu Leu Leu Ser Thr Pro Thr Met Pro Ser Pro Ala Thr
245 250 255

Phe Ser Val Leu Glu Phe Phe Ser Ser Pro Asn Phe Pro Asp Leu
260 265 270